

I claim:

1. An automated navigation assistance system for one or a plurality of marine vessels comprising:
 - a) a special purpose device in each marine vessel adapted to collect sensor and vessel position data and transmit said data to a remote fail-safe server;
 - b) said fail-safe server being adapted to receive and store the sensor and vessel position data; said server being further adapted to receive and store static data and dynamic data;
 - c) the server being still further adapted to analyze the sensor and vessel position data, the static data and the dynamic data to generate an condition report in the event of an off-normal condition for a vessel and to transmit said report to the special purpose device located on said vessel; and
 - d) the special purpose device being adapted to receive the off-normal condition report and to automatically alert a vessel operator about the report.
2. The navigation assistance system of claim 1, wherein the special purpose device is further adapted to automatically navigate the vessel.
3. The navigation assistance system of claim 1, wherein the fail-safe server is adapted to cooperatively communicate with one or a plurality of separate navigation assistance systems.
4. The navigation assistance system of claim 1, wherein the sensor and vessel position data is collected and transmitted for continuous analysis by the remote fail-safe server.
5. The navigation assistance system of claim 1, wherein the special purpose device further comprises an interactive operator interface means for mariner-initiated communication with the server.

6. The navigation assistance system of claim 1, wherein the fail-safe server further comprises an interactive human interface means to enable human-initiated communication with the mariner through the special purpose device.
7. The navigation assistance system of claim 1, further comprising external communication means for initiating contact with a third party.
8. The navigation assistance system of claim 1, wherein the special purpose device further includes one or a plurality of ports for data transfer with other electronic devices.
9. The navigation assistance system of claim 1, wherein the special purpose device further comprises emergency beacon means for automatically notifying rescue personnel of vessel location in case of an emergency condition.
10. A method of ensuring marine vessel safety comprising
 - a) continuously automatically monitoring relevant data concerning participating marine vessels;
 - b) analyzing said relevant data to determine whether off-normal conditions exist; and
 - c) automatically notifying participating marine vessels of said off-normal conditions.
11. The method set forth in claim 10 wherein the relevant data consists of the group comprising sensor and vessel position data, dynamic data and static data.
12. The method set forth in claim 10, further comprising remotely operating a participating vessel.
13. The method set forth in claim 12, further comprising automatically remotely operating a participating vessel.
14. The method set forth in claim 10, further comprising responding to inquiries generated by a participating vessel operator.

15. The method set forth in claim 14, further comprising automatically responding to inquiries generated by a participating vessel operator.

16. The method set forth in claim 10, further comprising handing off data about a participating vessel from a first fail-safe server to a second fail-safe server.

17. An automated navigation assistance system for one or a plurality of marine vessels comprising:

a) a special purpose device in each marine vessel adapted to collect sensor and vessel position data and transmit said data to a remote fail-safe server; said special purpose device being further adapted to automatically navigate the vessel and still further comprising one or a plurality of ports for data transfer with other electronic devices;

b) said fail-safe server being adapted to receive and store the sensor and vessel position data; said server being further adapted to receive and store static data and dynamic data and still further adapted to cooperatively communicate with one or a plurality of separate navigation assistance systems;

c) the server being still further adapted to continuously analyze the sensor and vessel position data, the static data and the dynamic data to generate a condition report in the event of an off-normal condition for a vessel and to transmit said report to the special purpose device located on said vessel; said server further comprising an interactive human interface means for enabling human-initiated communication with a mariner through the special purpose device; and

d) the special purpose device being adapted to receive the off-normal condition report and to automatically alert a vessel operator about the report; said special purpose device further comprising an interactive operator interface means for mariner-initiated external

communication and still further comprising an emergency beacon means for automatically notifying rescue personnel of vessel location in case of an emergency condition.